bio-techne
TOCRIS

Print Date: Nov 28th 2023

Certificate of Analysis

www.tocris.com

Product Name: **Phorbol 12-myristate 13-acetate** **Catalog No.: 1201** **Batch No.: 25**

CAS Number: 16561-29-8

IUPAC Name: (1a*R*,1b*S*,4a*R*,7a*S*,7b*S*,8*R*,9*R*,9a*S*)-9a-(Acetyloxy)-1a,1b,4,4a,5,7a,7b,8,9,9a-decahydro-4a,7b-dihydroxy-3-(hydroxymethyl)-1,1,6,8-tetramethyl-5-oxo-1*H*-cyclopropa[3,4]benz[1,2-*e*]azulen-9-yl tetradecanoate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{36}H_{56}O_8$

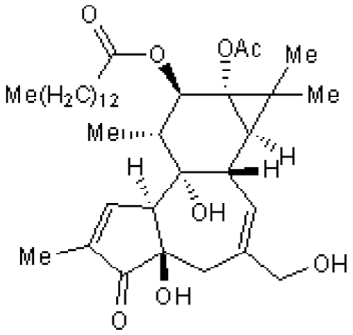
Batch Molecular Weight: 616.83

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.0% purity

Mass Spectrum: Consistent with structure

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Product Name: **Phorbol 12-myristate 13-acetate** **Catalog No.: 1201** **25**

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IUPAC Name: (1a*R*,1b*S*,4a*R*,7a*S*,7b*S*,8*R*,9*R*,9a*S*)-9a-(Acetyloxy)-1a,1b,4,4a,5,7a,7b,8,9,9a-decahydro-4a,7b-dihydroxy-3-(hydroxymethyl)-1,1,6,8-tetramethyl-5-oxo-1*H*-cyclopropa[3,4]benz[1,2-*e*]azulen-9-yl tetradecanoate

Description:

Phorbol 12-myristate 13-acetate is an extensively used phorbol ester high affinity activator of protein kinase C (K_i = 2.6 nM as measured by displacement of [3H]phorbol 12,13-dibutyrate binding in rat cortex synaptosomal membranes). It binds to the C1a and C1b domains of PKC inducing membrane translocation of PKC. Phorbol 12-myristate 13-acetate activates the PKC isoforms PKCα, -β, -γ, -δ, -ε, -η, and -θ but not PKCζ or -ι/λ. Phorbol 12-myristate 13-acetate is a tumor promoter. Phorbol 12-myristate 13-acetate can also induce differentiation of THP-1 monocytes to a macrophage phenotype in vitro... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

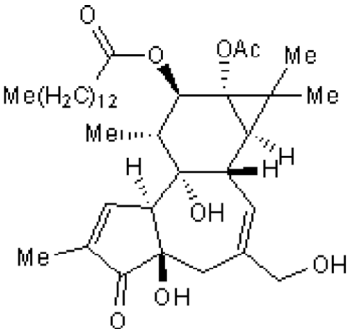
Batch Molecular Formula: $C_{36}H_{56}O_8$

Batch Molecular Weight: 616.83

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Lund *et al* (2016) The choice of phorbol 12-myristate 13-acetate differentiation protocol influences the response of THP-1 macrophages to a pro-inflammatory stimulus. J.Immunol.Methods ***430*** 64. PMID: 26826276.

Steinberg (2008) Structural basis of protein kinase C isoform function. Physiol.Rev. ***88*** 1341. PMID: 18923184.

Murphy *et al* (1999) Structural determinants of phorbol ester binding in synaptosomes: pharmacokinetics and pharmacodynamics. Eur.J.Pharmacol. ***381*** 77. PMID: 10528137.